

Subject	Proposed update to the Manual on WIGOS
In response to CGMS action/recommendation	-
HLPP reference	2.4.1: Actively ensure the WIS 2.0 usage for satellite data provision and discovery.
Executive Summary	<p>The existing WMO regulatory framework requires that “core” satellite data must be exchanged using the WIS in a format specified by the WMO Manual on Codes.</p> <p>Satellite operators commonly make use of community standard formats such as netCDF for data representation.</p> <p>It is proposed to work with WMO to update the Manual on the WIGOS such that “core” satellite data can be exchanged using the WIS in either the standard formats specified by the WMO Manual on Codes or in other standard formats endorsed by CGMS for satellite data.</p>
Action/Recommendation proposed	<p>Action: WGI is requested to consider the proposed update to the Manual on the WIGOS, and to seek the endorsement of CGMS Plenary.</p> <p>Action: Given the endorsement of CGMS Plenary, the CGMS Secretariat and the WMO Secretariat are requested to work together to prepare a paper for INFCOM-3 addressing the proposed update of the Manual on the WIGOS.</p>

1 INTRODUCTION

The existing WMO regulatory framework requires that “core” satellite data must be exchanged using the WIS in a format specified by the WMO Manual on Codes.

Satellite operators commonly make use of community standard formats such as netCDF for data representation.

In order to enable the WIS 2.0 infrastructure to be used for the exchange of all core satellite data, there is a need to modify the existing constraint on the data format to be used.

2 CURRENT REGULATORY SITUATION

2.1 Unified Data Policy

The WMO Unified Data Policy Resolution (Res.1) requires that Members shall provide on a free and unrestricted basis the core data that are necessary for the provision of services in support of the protection of life and property and for the well-being of all nations, at a minimum those data described in Annex 1 of the present resolution. Paragraph 1.1.2 of Annex 1 goes on to state that core satellite data are those listed in the Manual on the WMO Integrated Global Observing System (WIGOS) (WMO-No. 1160, Annex VIII to the WMO Technical Regulations).

2.2 Manual on WIGOS

2.4.4.1 of the Manual on WIGOS states that:

2.4.4.1 Members shall report and make available observations in real time through the WMO Information System (WIS) in the standard formats specified by the Manual on Codes (WMO-No. 306), Volumes I.2 and I.3.

2.3 Manual on Codes

Volume I.2 of the Manual on Codes specifies the BUFR, GRIB and CREX formats. Of these, BUFR is widely used for satellite data, and GRIB is also used in a small number of cases.

Volume I.3 comprises representations derived from data models and is not relevant to satellite data representation.

2.4 Implication for core satellite data

The implication of the above is that core satellite data must be exchanged via the WIS (2.0), and must be encoded in either BUFR, GRIB, or CREX format.

The difficulty is highlighted by considering the case of level 1 imager data from geostationary satellites. Table 3 of Attachment 4.2 to the Manual on WIGOS states that all level 1 radiance data from multispectral visible/infrared (VIS/IR) imagers on geostationary platforms are core data. This means that these data must be exchanged on the WIS in BUFR, GRIB or CREX format. The satellite data producers have, however, typically provided the data either in community standard formats such as netCDF and HDF, according to the CGMS LRIT/HRIT Global Specification, or in other formats specifically designed to cater to their user communities. This is clearly not consistent with the WMO requirements.

3 PROPOSED UPDATE

It is proposed to work with WMO to update the Manual on the WIGOS. The intention is to maintain the concept of limiting the data formats which can be used to a core set, whilst simultaneously enabling communities such as the satellite data providers to determine which additional formats can be used for their domain.

A revised paragraph 2.4.4.1 for the Manual on the WIGOS could read as follows:

2.4.4.1 Members shall report and make available observations in real time through the WMO Information System (WIS) in either the standard formats specified by the Manual on Codes (WMO-No. 306), Volumes I.2 and I.3, or in other standard formats endorsed by the apposite representative bodies, such as by CGMS for satellite data.

4 PROPOSED WAY FORWARD

WGI is requested to consider the proposed update to the Manual on the WIGOS, and to seek its endorsement by CGMS Plenary.

Given the endorsement of CGMS Plenary, the CGMS Secretariat and the WMO Secretariat are requested to work together to prepare a paper for INFCOM-4 in late 2026 addressing the proposed update of the Manual on the WIGOS.

5 ACTIONS AND/OR RECOMMENDATIONS FOR CONSIDERATION BY CGMS PLENARY SESSION

Action: WGI is requested to consider the proposed update to the Manual on the WIGOS, and to seek the endorsement of CGMS Plenary.

Action: Given the endorsement of CGMS Plenary, the CGMS Secretariat and the WMO Secretariat are requested to work together to prepare a paper for INFCOM-3 addressing the proposed update of the Manual on the WIGOS.

6 CONCLUSIONS

The current WMO regulations require core satellite data to be exchanged on WIS 2.0 using either BUFR, GRIB or CREX formats. Many core satellite products, such as level 1 geostationary imagery, are not suited to these formats.

A modest change to the Manual on the WIGOS is proposed to adapt the regulations to the status quo whilst maintaining their intention.